FEDERAL-STATE COOPERATIVE

SNOW SURVEYS AND IRRIGATION WATER FORECASTS

for

Montana and Yellowstone River Tributaries in Wyoming

By
Division of Irrigation, Soil Conservation Service
United States Department of Agriculture
and
Montana Agricultural Experiment Station

In cooperation with the U. S. Forest Service, U. S. Geological Survey, National Park Service, U. S. Bureau of Reclamation, State Engineers of Montana and Wyoming and other Federal, State and local organizations.

As of

APR. 1, 1950

FEDERAL-STATE COOPERATIVE
SNOW SURVEY AND IRRIGATION WATER FORECASTS

FOR

MONTANA and NORTHERN WYOMING

Upper Missouri and Upper Columbia River
Basins

Report Prepared
by

Ashton R. Codd: Hydraulic Engineer
Soil Conservation Service

and

O. W. Monson: Head, Agricultural Engineering
Montana State College

Division of Irrigation
Soil Conservation Service

and

Montana Agricultural Experimental Station
Bozemen, Montana

APRIL 1 1950
OUTLOOK FOR
IRRIGATION WATER SUPPLY
FROM SNOW SURVEYS

* On the Upper Missouri basin, the supply is "FAIR" to "GOOD." The Jefferson and Gallatin are slightly below average, with the Madison slightly above average. On the Upper Yellowstone, the supply is close to average pointing to the low side, while the Lower Yellowstone (Wind, Big Horn, and Shoshone) river basins show an above average condition. The Tongue and Powder River basins measurements indicate a definite trend toward a water shortage this summer in these basins.

* The Upper Columbia River basin is in excellent condition for an abundant water supply this season. The Flathead and Kootenai have an abnormally large amount of snow with many measurements exceeding all past records for fifteen years.

The release of this bulletin has been withheld until after the annual meeting of the Upper Missouri River Water Committee held on April 11, 1950 in order to express the general opinion of that group.

JEFFERSON:

The Jefferson River basin has a "FAIR" supply of snow water for this season. Many of the measurements indicate a below average snow water content but not serious enough to become alarming. Most of the snow courses are only three years old and yet stand up well with Elk Horn and Miner Lake where longer records are available.

MADISON:

On the Madison River basin there is an "EXCELLENT" snow pack which indicates a stream flow 30% above the average from snow melt runoff.

GALLATIN:

The Gallatin basin indications are close to average for twelve years of record. With a good spring season, there should be no irrigation water shortage this season other than the usual late deficiency.

MISSOURI MAIN STEM:

The Missouri Main Stem from Three Forks to Fort Benton should flow about average volume judging from records of the past twelve years. The tributary basins to the northwest will, however, be considerably higher in proportion. The Sun, Teton and Marias Rivers show an "EXCELLENT" water supply for this coming runoff season. The Milk and Musselshell rivers have close to average snow water content. May measurements to be made on the upper reaches of the Milk are apt to give a better indication of actual flow by the end of this month.

UPPER YELLOWSTONE:

The Upper Yellowstone River basin is in "FAIR" shape being rather spotted in its above-average figures through Yellowstone Park and the below-average figures along the Absorkee to the northern Big Horn Range. This below average condition is more pronounced on the eastern slopes of the Big Horn Mountains where a definite below average condition exists. Reservoir management on these two rivers should be closely watched to provide water for late irrigation if possible. Crop planning should be revised to meet the situation.

LOWER YELLOWSTONE:

The Wind River and Big Horn River are in "GOOD" to "EXCELLENT" shape where an above average snow pack has been measured on most of the snow courses. The older courses indicate about 30% above average. The Popo Agie River basin above Lander has an exceptionally large supply of water for irrigation this season.

UPPER COLUMBIA RIVER BASIN:

The Upper Columbia River basin snow survey measurements indicate an "EXCELLENT" snow water supply for this coming season. The northern tributaries, Kootenai and Flathead have many snow courses where alltime high water content measurements exist. Accumulated precipitation records parallel these figures. Snow measurements on the Clarks Fork are also above average, the runoff, however, will not be in such large proportions as the Flathead and Kootenai. Snow measurements on the Kootenai basin in Canada indicate an above average seasonal runoff from that portion of the basin.

Once again for the third consecutive year a FLOOD POTENTIAL exists on the Upper Columbia River basin. Abnormally high temperatures accompanied by rain storms will certainly bear watching by all residents having installations in and close to the river channels.

PRELIMINARY ESTIMATES OF RUNOFF AT A NUMBER OF
REPRESENTATIVE GAGING STATIONS IN MONTANA
Soil Conservation Service - Division of Irrigation

NAME OF STREAM	PERIOD AND VOLUME FORECAST IN ACRE FEET		
MISSOURI BASIN:	May - June	July-August-Sept.	May - Sept.
Gallatin River at Gateway	242,000	123,000	365,000
Hyalite Creek at Ranger Station	19,800	11,000	35,000
North Fork Musselshell at Delpine	3,570	1,780	5,350
Yellowstone River at Corwin Springs	1,039,000	831,000	1,870,000
Clarks Fork River at Chance	49,200		
		May-June-July	
Red Lodge River above Cooney Reservoir	14,590	7,930	22,520
Missouri River at Fort Benton	2,375,000		
LOWER YELLOWSTONE:	April-June	April-September	
Popo Agie River at Riverton		550,000	
Wind River at Riverton		750,000	
Shoshone River below Shoshone Dam		1,000,000	
COLUMBIA RIVER BASIN:			
Bitterroot River at Darby	570,000	685,000	1,255,000
Clark Fork above Missoula	1,520,000	1,820,000	3,340,000
Clark Fork below Missoula	2,850,000	3,330,000	6,180,000
Clark Fork at St. Regis	3,750,000	4,370,000	8,120,000
Flathead River at Columbia Falls	7,004,000	8,975,000	15,979,000
Flathead River at Polson	7,309,000	10,075,000	17,584,000
Clark Fork River at Plains	8,580,000	14,900,000	23,480,000
Clark Fork River at Heron	9,800,000	16,900,000	26,700,000

Note: All estimated volumes subject to a discrepancy of plus or minus 10 to 15%.

U S DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
H. H. Bennett, Chief

DIVISION OF RESEARCH
M. L. Nichols, Chief
Washington, D. C.

MONTANA AND NORTHERN WYOMING SNOW SURVEY COURSES

LEGEND
- □ TOWNS AND CITIES
- ● 1304 SNOW SURVEY COURSE
- ○ (14) IDAHO & WYOMING NUMBERS
- ▲ STREAM GAGING STATIONS

JANUARY 1950

DIVISION OF IRRIGATION — BOZEMAN MONTANA

SCALE IN MILES 50 25 0 50 100

REPRODUCED BY THE SOIL CONSERVATION SERVICE, CARTOGRAPHIC DIVISION, LINCOLN, NEBR. 58,11464

INDEX TO MONTANA SNOW COURSES

Drainage Basin and Course Name	Montana Number	Location: Elev.	Sec. Lat.	Twp.	Range Long.	Record Began	Measuring Dates[a]	Measured By:[b]
Missouri River Drainage								
JEFFERSON RIVER								
(ROCK-BEAVERHEAD)								
Lakeview Ridge	11E3	7100	27	1S	2W	1948	3,4,5	9
Lakeview Canyon	11E4	6930	26	1S	2W	1948	3,4,5	9
Limekiln	11E2	6950	15	5S	9W	1940	3,4	1
White Pine Ridge	11E1	8550	18	1S	9W	1945	3,4	1
(HORSE PRAIRIE)								
Bloody Dick	13D10	7600	12	6S	10W	1948	3,4	1
Gold Stone	13D9	8100	11	6S	10W	1948	3,4	1
Lemhi Pass	13E1	7480	9	10S	15W	1940	3,4	1
Merrell Creek	13D12	6650	14	9S	15W	1948	3,4	1
Trail Creek	13E2	7090	15	10S	15W	1948	3,4	1
Railway Junction	13D11	6800	27	6S	15W	1948	3,4	1
(BIG HOLE)								
Big Hole Pass	13D3	7440	28	3S	18W	1948	3,4	1
Big Hole Pass(Below)	13D4	6900	24	3S	18W	1948	3,4	1
East Boundary	13D5	6700	22	3S	17W	1948	3,4	1
Gibbons Pass	13D2	7100	4	2S	19W	1934	2,3,4,5	1,2
Jahnke Creek	13D8	7340	25	7S	10W	1948	3,4	1
Miner Forks	13D6	7300	24	6S	17W	1948	3,4	1
Miner Lake	13D7	6720	10	6S	16W	1945	3,4,5	1
(WISE RIVER)								
Anderson Mdw.	13D14	7000	18	3S	12W	1948	3,4	1
Elk Horn	13D15	8150	15	4S	12W	1934	3,4,5	2
Wise River	13D13	6300	15	2S	12W	1948	3,4	1
(RUBY RIVER)								
Cottonwood	11E2	5900	24	10S	3W	1948	3,4	1
Cottonwood (Upper)	11E1	8400	30	10S	2W	1948	3,4	1
Flashlight	12D3	6950	22	8S	7W	1945	3,4,5	1
Tobacco Root	12D2	6900	13	4S	3W	1948	3,4	1
Vigilante	11D1	6125	28	9S	3W	1948	3,4	1
MADISON RIVER								
Hebgen	11E5	6550	22	11S	3E	1934	1,2,3,4,5	2
West Yellowstone	11E7	6700	34	13S	5E	1934	1,2,3,4,5	2
Norris Basin	10E2	7500	44°-44'		110°-42'	1935	3,4	5,6
GALLATIN RIVER								
Devil's Slide	10D4	8100	14	5S	6E	1935	3,4,5	2,6
Hood Meadow	10D3	6600	22	4S	6E	1934	3,4,5	2,6
Mystic Lake	10D2	6600	30	3S	7E	1935	2,3,4	6,7
New World	10D1	6700	24	3S	6E	1939	2,3,4,5	6,7
21-Mile	11E6	7150	1	11S	5E	1934	1,2,3,4,5	2
MISSOURI RIVER MAIN STEM								
Chessman Reservoir	12C5	6200	2	8N	5W	1936	1,2,3,4,5	2
Crystal Lake	9C1	6100	24	12N	17E	1941	3,4	1
Grasshopper	10C2	7000	19	9N	8E	1938	3,4	1
Kings Hill	10C1	7950	35	13N	7E	1937	3,4,5	2
Picnic Grounds	12C6	6500	22	5N	6W	1940	2,3,4	3
Pipestone Pass	12D1	7200	11	1N	7W	1938	2,3,4,5	1
Stemple Pass	12C1	6900	16	13N	7W	1934	3,4,5	2
Tenmile Creek,Lower	12C2	6250	13	8N	6W	1935	1,2,3,4,5	2
Tenmile Creek,Middle	12C3	6800	13	8N	6W	1934	1,2,3,4,5	2
Tenmile Creek,Upper	12C4	8000	19	8N	5W	1935	1,2,3,4,5	2
(TETON RIVER)								
Bright Creek	12A1	6000	13	26N	10W	1948	3,4	1
Waldron Creek	12B2	5000	16	25N	9W	1948	3,4	1
West Fork	12B1	6000	6	25N	9W	1948	3,4	1
(SUN RIVER)								
Bench Mark	12B8	5500	9	20N	10W	1948	3,4	1
Cabin Creek	12B6	5400	33	23N	10W	1949	3,4	1
5-Bull	12B9	5600	36	20N	10W	1948	3,4	1
Gates Park	12B5	5300	31	24N	10W	1949	3,4	1
Goat Mountain	12B7	7000	20	22N	10W	1934	3,4	2
My Lake	13B9	7300	21	23N	12W	1950	3,4	1
Wrong Creek Ridge	12B3	6800	17	25N	10W	1949	3,4	1
Wrong Creek	12B4	5700	32	25N	10W	1949	3,4	1
(MARIAS RIVER)								
Marias Pass	13A5	5250	34	30N	14W	1936	1,2,3,4,5	2
Snow Lab. #16	13A9	5200	15	29N	14W	1947	1,2,3,4,5	2
(MILK RIVER)								
Rocky Boy	9A1	5200	15	28N	16E	1941	3,4	7
(MUSSELSHELL RIVER)								
Grasshopper	10C3	7000	19	9N	8E	1938	3,4	1
UPPER YELLOWSTONE								
Camp Senia	9D1	7890	2	8S	18E	1937	4	1
Canyon	10E3	7750	44°-44'		110°-30'	1938	1,2,3,4,5	Pd.Obs.
Cooke City	10D7	7400	25	9S	14E	1937	1,2,3,4,5	5
Crevice Mt.	10D5	8400	29	9S	9E	1935	3,4	1
Independence	10D6	8000	22	7S	12E	1941	3,4	Pd.Obs.
Lake Camp	10E4	7850	44°-34'		110°-24'	1937	1,2,3,4,5	Pd.Obs.
Lodgepole (Wyo.)	9E1	8200	32	56N	106W	1940	4,5	1
Lupine Creek	10E1	7300	44°-54'		110°-37'	1938	1,2,3,4,5	5
(SHIELDS RIVER)								
Porcupine	10C3	6500	10	4N	10E	1938	3,4	1
LOWER YELLOWSTONE								
(WIND RIVER) WYO.								
Brooks Lake #3	10F2	9200	23	44N	110W	1939	2,3,4,5	Pd.Obs.
Burroughs Creek	9F6	8800	15	43N	107W	1948	2,3,4,5	Pd.Obs.
Dinwoodie	9F10	10000	9	38N	105W	1948	2,3,4,5	Pd.Obs.
Dry Creek	9F9	9500	34	4N	105W	1948	2,3,4,5	Pd.Obs.
DuNoir	9F2	8750	27	42N	108W	1940	2,3,4,5	Pd.Obs.
Geyser Creek	9F3	8500	12	41N	108W	1948	2,3,4,5	Pd.Obs.
Hobbs Park	9G2	10000	22	2S	3W	1948	2,3,4,5	Pd.Obs.
Little Warm	9F4	9500	24	41N	108W	1948	2,3,4,5	Pd.Obs.
Mosquito Fork R.S.	9G3	9500	23	2S	3W	1940	2,3,4,5	Pd.Obs.
Sheridan R. S.	9F1	7500	3	42N	109W	1939	2,3,4,5	1
St.Lawrence R.S.	9F11	9000	26	1N	4W	1940	2,3,4,5	Pd.Obs.
T-Cross Ranch	9F5	8000	1	43N	107W	1940	2,3,4,5	Pd.Obs.
Trout Creek	9G1	8400	5	2S	2W	1948	2,3,4,5	Pd.Obs.
Togwotee Pass	10F1	9600	29	44N	110W	1936	2,3,4,5	10
(POPO AGIE RIVER) WYO.								
Blue Ridge	8G2	9500	23	31N	101W	1939	2,3,4,5	1
Grannier Meadows	8G4	9000	19	30N	100W	1936	2,3,4,5	1
Larson Creek	9G4	9000	12	30N	103W	1948	3,4,5	1
Sawmill Glade	8G1	8500	3	31N	101W	1939	2,3,4,5	1
South Pass	8G3	9000	13	30N	101W	1939	2,3,4,5	1
BIG HORN RIVER WY.								
Beavers Mill	9F8	8900	6	43N	102W	1948	2,3,4,5	Pd.Obs.
Owl Creek	8F1	8700	36	43N	101W	1948	2,3,4,5	Pd.Obs.
Tensleep R.S.	7E3	8300	30	49N	86W	1935	4,5	1
Timber Creek	9E2	8800	25	47N	103W	1948	4,5	1
Ranger Creek	7E1	8800	32	53N	88W	1935	4,5	1
Wood River	9F7	8000	28	46N	103W	1939	2,3,4,5	1
(SHOSHONE RIVER) WYO.								
East Entrance	10E6	7000	17	52N	109W	1948	1,2,3,4,5	5
Sylvan Pass	10E5	7100	12	52N	110W	1936	1,2,3,4,5	5
TONGUE RIVER WYO.								
Big Goose	7E2	7700	4	53N	86W	1935	4,5	1
POWDER RIVER WYO.								
Red Fork	7E1	7000	18	43N	85W	1936	4,5	Pd.Obs.
Sour Dough	6E1	8500	17	49N	84W	1936	4,5	1
Columbia River Basin								
KOOTENAI RIVER								
Baree Mountain	15B1	6000	1	25N	31W	1937	4,5	1
Blue Bird Basin	14A1	6800	24	37N	26W	1937	4,5	1
Brush Creek	14A4	5000	13	30N	18W	1941	3,4	1
Red Mountain	15A1	6000	4	36N	29W	1937	3,4,5	1
FLATHEAD RIVER								
Big Creek	13B3	6750	6&7	22N	18W	1941	4,5	4
Brush Creek	14A4	5000	13	30N	26W	1937	3,4	1
Cattle Queen	13A1	4700	7	35N	17W	1939	3,4	5
Desert Mountain	13A2	5600	24	31N	19W	1937	1,2,3,4,5	1
Elk Mountain	13B4	6750	1	20N	19W	1941	3,4	4
Goat Mountain	12B7	7000	20	22N	10W	1934	3,4	2
Hell Roaring Divide	14A3	5770	35	32N	22W	1942	4,5	1
Kishenehn	14A2	4300	7	37N	21W	1946	4,5	5
Limestone Pass	13B8	7000	34	17N	15W	1948	3,4	1
Logan Creek	14A5	4300	34	30N	21W	1937	3,4	1
Marias Pass	13A5	5250	34	30N	14W	1934	1,2,3,4,5	2
North Fork Jocko	13B7	6330	3	17N	17W	1941	3,4	4
Rainy Lake	13B6	4300	11	18N	16W	1947	3,4,5	1
Snow Lab. # 16	13A9	5200	15	29N	14W	1946	1,2,3,4,5	2
Spotted Bear Mt.	13B2	7000	23	25N	15W	1948	3,4	1
Strawberry Lake	13B10	6500	11	28N	19W	1948	3,4	1
Trinkus Lake	13B1	6500	9	25N	17W	1948	3,4	1
Trout Lake	13B11	3600	21	28N	17W	1948	3,4	1
Upper Holland Lake	13B5	7000	28	20N	16W	1948	3,4	1
UPPER CLARK FORK								
Chessman Reservoir	12C5	6200	2	8N	5W	1936	1,2,3,4,5	2
East Fork Ranger Stn	13D1	5400	16	2N	17W	1937	4	1
El Dorado Mine	13C9	7800	23	8N	12W	1946	4	11
Gold Creek Lake	13C8	7200	14	8N	12W	1946	4	11
Intergaard	13C4	6450	6	5N	13W	1939	2,3,4	3
North Fork Jocko	13B7	6330	3	17N	17W	1941	3,4	4
Picnic Grounds	12C6	6500	22	5N	6W	1940	2,3,4	3
Pipestone Pass	12D1	7200	11	1N	7W	1938	2,3,4,5	1
Rainy Lake	13B6	4300	11	18N	16W	1947	3,4,5	1
Skalkaho Summit	13C3	7258	30	6N	17W	1937	4	1
Slide Rock Mountain	13C2	7100	26	10N	16W	1937	4	1
Southern Cross	13C5	6500	9	5N	13W	1939	2,3,4	3
Stemple Pass	13C1	6900	16	13N	7W	1934	3,4,5	2
Storm Lake No. 2	12C7	7780	19	4N	13W	1939	4	1
Stuart Mill	13C6	6500	19	5N	13W	1939	2,3,4	3
Stuart Mountain #1	13C1	7400	6	11N	18W	1936	4	1
Tenmile Creek,Lower	12C2	6250	13	8N	6W	1935	1,2,3,4,5	2
Tenmile Creek,Middle	12C3	6800	13	8N	6W	1935	1,2,3,4,5	2
Tenmile Creek,Upper	12C4	8000	19	8N	5W	1935	1,2,3,4,5	2
PEND OREILLE RIVER								
Baree Mountain	13B1	6000	1	25N	31W	1937	4,5	1
Freezeout Summit	15C3	7000	21	15N	27W	1937	4	1
Hoodoo Creek	13C1	6200	9&16	14N	27W	1937	4	1
BITTERROOT RIVER								
East Fork R. S.	13D1	5400	16	2N	17W	1937	4	1
Gibbons Pass	13D2	7100	4	2S	19W	1934	2,3,4,5	1
Mud Creek Pasture	14C1	4500	24	11N	24W	1937	3	1
Nezperce Camp	14D2	5580	19&20	1S	23W	1937	4	1
Nezperce Pass	14D1	6575	32	28N	16E	1937	4	1
Skalkaho Summit	13C3	7259	30	6N	17W	1937	4	1
Stuart Mountain #1	13C1	7400	6	11N	18W	1936	4	1
Saskatchewan River Basin								
ST. MARY RIVER								
Iceberg Lake	13A3	6000	48°-50'		113°-42'	1922	5	2,8
Piegan Pass # 4	13A4	5000	48°-46'		113°-40'	1922	5	2,8
Piegan Pass # 6	13A6	6500	48°-45'		113°-42'	1922	5	2,8
Mount Allen # 7	13A7	7000	48°-44'		113°-40'	1922	5	2,8
Ptarmigan # 8	13A8	5800	48°-50'		113°-42'	1922	5	2,8

a. Numerals 1,2,3,4, and 5 refer to January 1, February 1, March 1, April 1, and May 1.

b. Numerals refer to Agency that secures the snow survey as follows:

1. U. S. Forest Service
2. U. S. Geological Survey and U. S. Engineer Corps
3. Montana Power Company
4. U. S. Indian Service
5. National Park Service
6. Montana Experiment Station
7. City of Bozeman
8. Dominion Water and Power Bureau
9. U. S. Fish and Wildlife Service
10. U. S. Bureau of Reclamation
11. Deerlodge Citizens Committee

Pd. Obs. Paid Observer by Soil Conservation Service

SUPPLEMENTAL INDEX LISTS OF SNOW SURVEY COURSES IN ADJACENT BASINS, USED IN THIS REPORT AND SHOWN ON THE INDEX MAP

DRAINAGE AND SNOW COURSE MISSOURI	Adj. State No.	Mont. No.	Elev. Feet	Section Lat.	Twp.	Range Long.	Record Began	Measurement Dates	Measured By
JEFFERSON	Idaho								
Kilgore	10	11E12	6200	6	12N	39E	1937	1,2,3,4,5	pd. obs.
Blue Ridge Mine	5	11E11	6700	27	13N	38E	1938	4	pd. obs.
Camp Creek	6	12E3	6800	21	13N	36E	1936	1,2,3,4	1
Moose Creek	8	13D16	6200	22-27	27N	21E	1937	3,4,5	1
Big Springs	3	11E9	6500	34	19N	44E	1936	1,2,3,4,5	10
Island Park	9	11E10	3600	28	13N	43E	1936	1,2,3,4,5	10
Valley View	17	11E8	6500	7	15N	44E	1936	1,2,3,4	10
UPPER YELLOWSTONE	Wyo.								
Lewis Lake Div.	9	10E9	7900	44-13		110-40	1919	1,2,3,4	10
Aster Creek	2	10E8	7700	44-17		110-37	1919	1,2,3,4	10
Tom Thumb Summit		10E7	7900	44-22		110-35	1949	3,4	10
LOWER YELLOWSTONE (Wind River)	Wyo.								
Togwotee Pass	12	10F1	9600	29	44N	110W	1936	2,3,4,5	10
Kendall	25	9F12	7900	23	38N	110W	1936	3,4,5	1
Loomis Park	26	10F4	8500	14	37N	111W	1942	3,4,5	1
Yellows Jacket	14	10F5	6775	33	42N	112W	1936	3,4,5	1
Black Rock	2	10F3	8600	4	44N	111W	1936	2, 4	10
Dutch Joe	23	9G6	8700	32	31N	104W	1936	4,5	1
Mulligan Park	24	9G5	8900	17	35N	108W	1936	3,4,5	1
KOOTENAI	Idaho				COLUMBIA				
Smith Creek	13	16A1	4800	29	64N	3W	1937	4,5	1
	Canada								
Fernie	10		3500	49-31		115-01	1939		
Gray Creek	34		5100	39-37		116-41	1948		
Marble Canyon	32		5000	51-12		116-09	1947		
Nelson Creek	19		3050	44-25		117-14	1938		
Sinclair Pass	8A		4500	50-40		115-58	1947		
Sullivan Mine	20A		5100	49-43		116-01	1945		
Upper Elk River	41		4400	50-01		114-56	1947		
Kimberley	20		3800	49-41		115-59	1945		
UPPER CLARK FORK	Idaho								
49 Meadows	1	15B10	5000	6	43N	5E	1937	1,2,3,4,5	1
Lookout	10	15B2	5250	4	47N	6E	1921	1,2,3,4,5	1
Above Roland	2	15B7	4350	35	47N	6E	1926	3	12*
Below Roland	3	15B6	3770	34	47N	6E	1926	3	12*
Sunset	16	15B9	5600	28	49N	5E	1921	3	12*
PEND OREILLE	Idaho								
Mosquito Ridge	9	16A4	5110	5	54N	2E	1937	4,5	1
BITTERROOT	Idaho								
Moose Creek	8	13D16	6200	22-27	27N	21N	1937	3,4,5	1
Kit Carson	3	14D3	4700	4	27N	16E	1937	4	1
Savage Pass	7	14C4	6000	18	36N	15E	1937	4	1
Powell Pasture	6	15C3	3700	27	27N	14E	1937	4	1
Packers Mdw.	5	14C2	5700	15	38N	15E	1937	2,3,4,5	1

*Washington Water Power Company

STORAGE IN RESERVOIRS OF MONTANA

MISSOURI RIVER BASIN — Reservoir Volumes in 10,000's of Acre Feet

RESERVOIR	Location or on Diversion from	Usable Capacity	Contents This Year April 1 1950	Contents Last Year April 1 1949	April 1 10-Year Average 1939-48
Lake Sewall	Missouri	37.8	24.0	32.9	
Hauser Lake	Missouri	52.1	27.7	29.9	45.0
Ft. Peck Res.	Missouri	19,000.0	11,940.0	13,140.0	4,148.0
Ruby Res.	Ruby	38.5			
Harrison Lake	Willow Cr.	17.8			
Hebgen Res.	Madison River	345.0	216.6	268.4	240.8
Madison Res.	Madison River	41.0	35.4	35.2	
Smith River Res.	Smith River	10.7			
Gibson Res.	N.Fk. Sun River	105.0	46.6	70.1	75.6
Willow Creek	N.Fk. Sun-Willow Cr.	32.3	3.8	19.4	12.9
Pishkun Res.	N.Fk. Sun River	32.0	18.8	15.9	17.4
Lower Two Medicine L.	Two Medicine River	14.0	0	0	3.6
Four Horns Res.	Badger Creek	20.0	6.0	9.8	8.5
Birch Creek Res.	Birch Creek	30.0	21.3	29.3	24.0
Lake Francis Res.	Birch Creek	112,0	83.3	103.3	68.0
Ackley Lake	Judith River	5.8		5.2	
Durand Res.	N.Fk. Musselshell	7.0	6.4	3.6	
Dead Man Basin	Musselshell River	52.5		----	
Martinsdale Res.	So.Fk. Musselshell	23.1	11.0	13.6	
Fresno Res.	Milk River	127.2	17.7	74.5	
Nelson Res.	Milk River	66.8	5.7	33.5	@73.9
Glacier Lake	Rock Creek	4.2		5.4	----
Mystic Lake	W.Rosebud Creek	20.8	4.3	5.6	30.9
Cooney Res.	Red Lodge Creek	27.5	14.1	5.4	3.5
Tongue Res.	Tongue River	73.9	10.9		
Sherburne Lake Res.	Swiftcurrent Creek	66.1			17.6
Lake Helena	Missouri River	10.4	1.1	1.6	
YELLOWSTONE RIVER BASIN (Wyoming)					
Buffalo Bill	Shoshone	456.6		172.9	267.7
Sunshine	Greybull	52.0			----
Pilot Butte	Wind River	30.1		13.1	18.2
Bull Lake	Wind River	155.0		40.0	56.8
COLUMBIA RIVER BASIN					
Georgetown Lake	Flint Creek	31.0	18.4	26.4	@23.5
E.Fk.Rock Cr. Res.	E.Fk. Rock Creek	16.0			
Nevada Creek Res.	Nevada Creek	12.6		7.6	
W.Fk. Bitterroot Res.	E.Fk. Bitterroot	31.7	3.5	10.0	
Como Lake	Rock Creek	34.8			
Flathead Lake(Sommers)	Flathead River	1,791.0	614.9	561.7	616.4
Little Bitterroot	Little Bitterroot	37.1	29.0*	36.1*	@10.6*
Dry Fork Res.	Dry Fork Creek	6.7	4.9*	3.8*	@ 2.5*
Mission Valley Reservoirs	Mission Valley (Flathead River)	105.0	31.8**	32.3**	@34.4**

* Comprise two reservoirs on Dry Creek
* Comprise two reservoirs on Little Bitterroot River
**Comprise nine small reservoirs on Mission Valley Project Indian Reclamation Service
@ 5-Year average 1944-48

PRECIPITATION DATA FOR APRIL 1, 1950

STATIONS	1949 Oct.	1949 Nov.	1949 Dec.	1950 Jan.	1950 Feb.	March Precip.	March Dep. From Normal	Accum. Sum To Date	Dep. From Normal
	PRECIPITATION								
WEST OF DIVIDE									
Butte	0.62	0.53	0.34	0.66	0.29	1.70	1.08	4.14	1.01
Deerlodge	0.21	0.27	0.31	0.67	0.07	0.80	0.19	2.33	-1.04
Hamilton	1.20	2.03	0.71	2.23	0.84	----			
Kalispell	0.98	1.42	0.97	1.94	0.82	1.66	0.71	7.79	0.27
Missoula	0.74	0.72	0.65	1.75	0.50	0.58	-0.23	4.94	-0.15
Trout Creek	2.89	5.28	6.60	8.71	5.20	4.71	1.66	33.39	13.62
Thompson Falls	2.05	2.95	3.51	4.71	2.25	2.76	0.83	18.23	6.66
(Average	1.24	1.89	1.89	2.95	1.42	2.03	1.18	11.80	4.03
CENTRAL DIVISION									
Babb	1.61	0.57	1.64	1.48	0.14	----			
Dillon	1.19	0.13	0.18	0.17	0.05	----			
Fort Benton	1.86	0.23	1.28	0.62	T	2.15	1.53	6.14	2.55
Great Falls	.90	0.05	0.53	0.91	0.01	2.14	1.28	4.54	0.22
Havre	1.41	0.03	0.86	0.92	0.24	1.51	1.00	4.97	1.34
Helena WBO	0.28	0.15	0.37	1.05	0.14	0.82	0.03	2.81	-0.46
Livingston	1.40	0.51	0.53	1.20	0.23	1.52	0.66	5.39	0.88
Lewistown Arpt.	1.82	0.18	1.78	----	----	----			
Mystic Lake	2.32	0.04	1.41	2.81	0.78	1.63	-0.42	8.99	0.26
Summit (Marias)	3.06	5.13	8.73	9.35	3.55	4.94	1.66	33.47	15.93
Yellowstone Park Wy.	1.89	9.81	1.03	2.32	0.65	1.60	-0.02	6.70	-1.60
(Average)	1.61	0.71	1.67	2.08	0.64	2.04	0.78	9.13	2.93
EASTERN DIVISION									
Billings #2	2.21	0.02	0.72	0.69	0.31	0.80	-0.04	4.75	0.31
Circle	1.15	0.06	0.39	0.39	0.23	0.43	-0.57	3.65	-1.80
Fraser	0.90	0.05	0.50	1.19	0.56	1.05	0.35	4.25	1.00
Malta	1.25	0	0.62	0.90	0.25	0.74	0.20	3.76	0.78
Mildred	1.69	T	0.51	0.19	0.33	0.71	0.29	3.43	0.99
Medicine Lake	0.50	T	0.35	0.87	0.18	0.53	0.12	2.43	0.03
Miles City	2.43	0.02	0.20	0.22	----	----			
Fort Peck	0.67	T	1.04	0.83	0.51	----			
(Average)	1.35	0.02	0.54	0.66	0.34	0.71	0.06	3.54	0.22

MONTANA SNOW SURVEYS April 1, 1950

MISSOURI BASIN

DRAINAGE BASIN AND SNOW COURSE **	No.	Elev.	Date of Survey 1950	Snow Depth (In.) 1950	Water Content (Inches) April 1 1950	Past Records 1949	Past Records 1948	Average Data April 1 Avg.	Average Data April 1 %Avg.	Years of Record
JEFFERSON RIVER										
(Rock-Beaverhead)										
Lakeview Ridge	11E3	7400	3/31	46.9	11.6	10.0	10.0	10.5	110	3
Lakeview Canyon	11E4	6930	3/31	56.8	10.3	12.7	11.3	11.4	91	3
Limekiln	11E2	6950	3/23	3.8	0.8	4.1	2.8	2.6	31	3
White Pine Ridge	11E1	8850	3/23	24.8	7.2	7.2	7.8	7.4	97	3
Kilgore	11E12	6200	3/29	44.0	15.5	11.0	8.4	10.9	142	14
Camp reek	12E3	6800	3/28	43.0	13.9	10.7	8.1	9.0	154	15
Blue Ridge Mine	11E11	6700	3/27	68.0	26.1	16.7	10.7	15.8	165	13
(Horse Pariie)			AVERAGE	41.0	12.2	10.3	8.44	9.66	126.2	
Bloody Dick	13D10	7600	3/15	39.2	11.6	15.2	10.2	12.3	94	3
Gold Stone	13D9	8100	3/15	50.4	15.2	19.0	13.0	15.7	96	3
Lemhi Pass	13E1	7400	3/21	32.4	9.5	11.8	11.2	10.8	88	3
Terrell Creek	13D12	6650	3/21	10.2	3.0	6.0	3.6	4.2	72	3
Trail Creek	13E2	7090	3/21	26.6	7.4	10.4	.0.5	9.4	79	3
Selway Junction	13D11	6500	3/21	26.1	7.5	9.2	6.8	7.8	96	3
(Big Hole)			AVERAGE	30.8	9.0	12.0	9.2	10.0	90	
Big Hole Pass	13D 3	7440	/16	3.2	18.2	24.5	.4.9	19.2	94	3
Big Hole Pass (Below	13D4	3900	3/16	7.2	15.4	19.6	.2.4	15.8	98	3
East Boundary	13D5	6700	3/16	.9.3	8.8	11.8	7.5	9.4	94	3
Jahnke Creek	13D8	7340	3/15	37.8	10.8	14.4	9.1	11.4	95	3
Miner Forks	13D6	7300	3/14	39.0	11.4	13.8	10.4	11.9	96	3
Miner Lake	13D7	6720	3/14	26.6	7.6	10.6	7.6	8.2	93	6
Moose Creek	13D16	6200	4/3	54.0	18.4	21.2	18.6	15.4	120	14
(Wise River)			AVERAGE	46.4	15.1	18.1	12.9	14.10	98	
Anderson Meadow	13D14	7000	3/17	27.6	8.3	10.6	6.9	8.6	96	3
Elk Horn	13D15	8450	4/1	34.5	10.0	13.6	9.4	9.0	110	12
Wise River	13D13	6300	3/17	15.6	5.2	7.4	4.8	5.8	90	3
(Ruby River)			AVERAGE	25.9	7.8	10.5	7.3	7.8	99	
Cottonwood	11E2	5900	3/24	35.5	11.5	11.9	7.3	10.2	112	3
Cottonwood (Upper)	11E1	8400	3/24	39.0	12.1	11.6	8.5	10.7	113	3
Flashlight	12D3	6950	3/22	14.5	4.2	6.7	5.9	5.5	76	6
Tobacco Root	12D2	6900	3/25	35.6	11.4	13.3	10.8	11.8	97	3
Vigilante	11D1	6125	3/24	4.2	1.0	0.0	2.2	1.1	100	3
			AVERAGE	33.3	8.1	8.7	6.9	7.9	100	

MONTANA SNOW SURVEYS April 1, 1950

MISSOURI BASIN

DRAINAGE BASIN AND SNOW COURSE **	No.	Elev.	Date of Survey 1950	Snow Depth (In.) 1950	Water Content (Inches) April 1 1950	Past Records 1949	Past Records 1948	Average Data April 1 Avg.	Average Data April 1 %Avg.	Years of Record
MADISON RIVER										
Hebgen	11E5	6550	3/30	42.2	14.0	14.6	11.7	12.2	115	15
West Yellowstone	11E7	6700	3/31	42.5	14.2	14.4	9.0	11.0	129	14
21-Mile	11E6	7150	3/31	61.3	21.0	20.6	14.4	16.3	129	14
Big Springs	11E9	6500	3/28	74.0	25.9	27.8	18.1	20.4	126	15
Island Park	11E10	3600	3/29	65.0	21.6	22.5	13.8	15.3	141	15
Valley View	11E8	6500	3/29	62.0	19.5	18.8	12.8	14.6	134	15
			AVERAGE	57.8	19.4	19.8	13.3	14.9	130	
GALLATIN RIVER										
Devil's Slide	10D4	8100	4/1	70.6	20.2	20.8	27.4	19.8	102	12
Hood Meadow	10D3	6600	4/1	28.4	7.3	10.9	13.3	8.3	88	12
Mystic Lake	10D2	6600	3/30	28.6	8.4	10.7	8.1	8.5	99	14
New World	10D1	6700	3/30	38.8	10.8	11.4	16.0	9.8	111	12
21-Mile	11E6	7150	3/31	61.3	21.0	20.6	14.4	16.3	129	14
			AVERAGE	45.5	13.5	14.9	15.8	12.5	108	
MISSOURI RIVER MAIN STEM										
Chessman Reservior	12C5	6200	4/1	15.6	4.4	7.6	9.2	4.6	96	15
Crystal Lake	9C1	6100	4/1	39.4	10.5	15.4	16.3	12.2	86	10
Grasshopper	10C2	7000	3/29	22.4	5.8	8.1	6.8	5.2	111	13
Kings Hill	10C1	7950	4/4	56.3	17.1	16.9	13.1	13.1	130	12
Pipestone Pass	12D1	7200	3/31	30.2	4.2	7.9	7.4	5.6	75	12
Stemple Pass	12C1	6900	3/31	44.2	11.6	13.5	10.3	9.4	123	12
Tenmile, Lower	12C2	6250	4/3	28.8	7.6	8.8	9.1	6.2	142	15
Tenmile, Middle	12C3	6800	4/4	48.9	12.8	12.8	14.1	10.2	133	15
Tenmile, Upper	12C4	8000	4/3	54.3	15.8	14.8	18.1	13.1	121	15
			AVERAGE	36.7	9.8	11.8	11.6	8.84	113	
(Teton River)										
Fright Creek	12A1	6000	3/30	60.2	22.3	17.9	13.4	17.9	125	3
Waldron Creek	12B2	5600	3/29	30.8	10.7	9.5	6.0	8.7	124	3
West Fork	12B1	6000	3/29	63.0	24.6	19.9	13.6	19.4	127	3
			AVERAGE	51.3	19.2	15.8	11.0	15.3	126	

MONTANA SNOW SURVEYS April 1, 1950

MISSOURI BASIN

DRAINAGE BASIN AND SNOW COURSE **	No.	Elev.	Date of Survey 1950	Snow Depth (In.) 1950	Water Content (Inches) April 1 1950	Past Records 1949	Past Records 1948	Average Data April 1 Avg.	Average Data April 1 %Avg.	Years of Record
(Sun River)										
Benchmark	12B8	5500	3/28	35.2	12.8	12.0	9.3	11.4	112	3
Cabin Creek	12B6	5400	4/5	28.7	9.5	7.5	0.0	0.0	00	2
5-Bull	12B9	5600	3/28	27.3	9.2	8.8	8.8	8.9	103	3
Gates Park	12B5	5300	4/4	39.9	13.1	11.7	0.0	0.0	00	2
Goat Mountain	12B7	7000	3/31	50.0	15.2	15.4	11.7	10.0	154	12
My Lake	13B9	7300	4/3	142.0	54.1	0.0	0.0	0.0	00	1
Wrong Creek Ridge	12B3	6800	3/30	78.4	28.5	22.5	0.0	0.0	00	2
Wrong Creek	12B4	5700	3/29	57.4	20.2	15.7	0.0	0.0	00	2
(Marias River)			AVERAGE	57.3	20.3	13.4	9.9	10.1	123	
Marias Pass	12B5	5250	3/31	83.0	28.7	21.4	18.9	17.0	169	15
Snow Lab. #16	13A9	5200	3/28	83.5	28.2	22.4	19.2	24.8	106	4
(Milk River)			AVERAGE	83.3	28.5	21.9	19.1	20.9	136.3	
Rocky Boy	9A1	5200	3/31	20.0	5.1	6.7	6.7	5.7	90	9
UPPER YELLOWSTONE										
Camp Senia	9D1	7890	3/31	26.2	5.8	7.4	9.3	7.2	81	13
Canyon	10E3	7750	3/31	58.5	18.5	18.3	12.7	16.0	116	5
Cooke City	10D7	7400	3/31	32.7	8.4	10.6	10.1	7.5	112	14
Crevice Mt.	10D5	8400	4/-	36.6	9.4	13.0	13.8	10.4	90	16
Independence	10D6	8000	3/26	70.4	21.2	20.3	18.6	18.3	116	10
Lake Camp	10E4	7850	3/31	45.5	13.6	15.2	11.5	9.2	148	15
Lupine	10E1	7300	3/30	40.1	11.7	14.2	10.1	9.7	121	12
Lewis LakeDivide	10E9	7000	3/16	127.0	45.4	47.1	31.8	41.9	108	31
Astor Creek	10E8	7700	3/16	106.0	38.8	38.6	22.7	29.8	130	32
Tom Thumb Summit	10E7	7900	3/16	81.0	28.6	27.4	16.9	24.3	118	4
(Shields River)			AVERAGE		20.6	21.2	15.8	17.3	114	
Porcupine	10C3	9200	4/1	22.6	5.7	9.1	6.1	4.6	124	12
(Musselshell River)										
Grasshopper	10C3	7000	3/29	22.4	5.8	8.1	6.8	5.2	111	13

MONTANA SNOW SURVEYS April 1, 1950

MISSOURI BASIN

DRAINAGE BASIN AND SNOW COURSE **	No.	Elev.	Date of Survey 1950	Snow Depth (In.) 1950	Water Content (Inches) April 1 1950	Past Records 1949	Past Records 1948	Average Data April 1 Avg.	Average Data April 1 %Avg.	Years of Record
LOWER YELLOWSTONE										
(Wind River)										
Brooks Lake #3	10F2	9200	3/29	93.7	31.8	26.2	21.1	21.0	152	15
Burroughs Creek	9F6	8800	3/31	58.4	19.8	13.9	0.0	0.0	00	2
Dinwoodie	9F10	10000	3/28	58.2	18.6	0.0	0.0	0,0	00	1
Dry Creek	9F9	9500	3/28	38.9	10.5	0.0	0,0	0.0	00	1
Du Noir	9F2	8750	3/30	42.9	13.4	10.3	7.5	9.7	138	10
Geyser Creek	9F3	8500	3/30	38.4	11.3	10 1	0.0	0.0	00	2
Hobbs Park	9G2	10000	3/27	76.2	27.7	22.8	0.0	0.0	00	2
Little Warm	9F4	9500	3/30	65.2	22.1	17.0	0.0	0.0	00	2
Mosquite Park	9G3	9500	3/27	47.0	14.3	10.4	0.0	0.0	00	2
Sheridan	9F1	7500	3/29	29.7	7.7	8.6	6.0	6.3	122	15
St. Lawrence	9F11	9000	3/26	39.2	10.5	9.6	4.9	8.2	129	7
T-Cross Ranch	9F5	8000	3/3_	27.5	7.7	7.3	5.6	6.6	117	10
Trout Creek	9G1	84[illegible]	3/27	24.2	7.1	8.2	0.0	0.0	00	2
Togwotee Pass	9F1	9600	3/27	116.0	28.4	32.0	27.4	28.0	137	15
Kendall	9F12	7900	4/1	46.1	13.1	15.0	6.3	11.2	117	14
Loomis Park	10F5	8500	4/1	69.2	26.6	19.6	15.3	16.5	161	15
Black Rock	10F3	8600	3/27	89.0	28.9	23.6	20.3	21.0	138	15
(Popo Agie River)			AVERAGE	56.4	18.2	15.6	12.7	14.2	134	
Blue Ridge	8G2	9500	4/2	54.2	19.1	15.9	10.8	10.9	175	11
Grannier Meadows	8G4	9000	4/2	67.9	24.3	17.5	14.2	12.8	190	14
Larsen Creek	9G4	9000	4/3	70.0	22.8	0.0	0.0	0,0	00	1
Sawmill Glade	8G1	8500	4/2	18.9	6.2	8.0	10.2	6.1	102	11
South Pass	8G3	9000	4/2	66.1	23.7	17.6	11.[illegible]	13.4	177	11
Mulligan Park	9G5	8900	4/1	48.9	15.0	11.1	7.0	10.5	143	15
Dutch Joe	9C6	8700	4/1	36.6	11.2	0.0	0.0	0,0	00	1
BIG HORN RIVER (Wyoming)			AVERAGE	51.8	17.4	14.0	10.7	10.1	158.2	
Beavers Mill	9F8	8000	4/6	40.2	8.9	7.9	0.0	0,0	00	2
Owl Creek	8F1	8700	4/5	27.8	6.2	6.6	0.0	0.0	00	2
Tensleep R. S.	7E3	8300	3/31	32.2	8.4	8.5	6.3	6.9	122	14
Timber Creek	9E2	9000	3/31	16.5	4.7	7.5	0.0	0.0	00	2
Ranger Creek	7E1	8800	4/2	44.5	9.3	9.8	8.0	8.2	113	14
Wood River	9E7	8000	3/30	18.2	5.0	7.4	6.1	5.5	91	9
			AVERAGE	29.9	7.1	8.0	6.8	6.9	102.8	

MONTANA SNOW SURVEYS April 1, 1950

MISSOURI BASIN

DRAINAGE BASIN AND SNOW COURSE **	No.	Elev.	Date of Survey 1950	Snow Depth (In.) 1950	Water Content (Inches) April 1 1950	Past Records 1949	Past Records 1948	Average Data April 1 Avg.	Average Data April 1 %Avg.	Years of Record
SHOSHONE RIVER										
East Entrance	10E6	7000	3/31	32.8	11.3	17.7	0.0	0.0	00	2
Sylvan Pass	10E5	7100	4/1	52.6	18.6	19.4	14.8	13.3	140	13
TONGUE RIVER										
Burgess Junction	7E4	7900	3/20	43.7	12.0	0.0	0.0	0.0	00	1
Big Goose	7E2	7700	3/20	12.9	2.5	5.3	5.5	4.2	60	14
Dome Lake	7E5	8800	3/20	31.8	5.9	0.0	0.0	0.0	00	1
			AVERAGE	29.5	6.8					
POWDER RIVER										
Muddy Pass	7E7	9700	3/16	31.4	8.4	0.0	0.0	0.0	00	1
Sour Dough	6F1	8500	4/3	25.3	5.1	7.7	8.0	5.9	86	14
Soldier Park	7E6	8700	3/17	20.8	4.6	0.0	0.0	0.0	00	1
			AVERAGE	25.8	6.0					
COLUMBIA RIVER DRAINAGE IN MONTANA										
KOOTENAI										
Baree Mountain	15B1	6000	3/31	151.8	61.3	55.2	40.6	38.8	158	12
Blue Bird Basin	14A1	6800	3/31	136.8	46.3	37.7	36.8	34.7	134	12
Brush Creek	14A4	5000	3/29	61.7	18.9	19.0	0.0	12.0	158	6
Fernie	Canada	3500	3/31	45.9	14.9	7.7	8.4	6.4	233	12
Ferguson	Canada	2900	3/31	59.1	22.9	21.1	22.1	18.6	123	11
Gerrard	Canada	6000	3/31	35.3	16.1	12.5	16.7	14.5	111	14
Gray Creek	Canada	5100	3/30	76.5	24.0	20.5	19.6	21.4	114	3
Kimberley	Canada	3800	3/31	37.0	11.2	7.1	5.5	4.3	261	12
Marble Canyon	Canada	5000	3/31	57.0	15.7	13.0	13.3	13.3	118	4
Nelson Creek	Canada	3050	3/30	49.6	19.9	18.8	15.1	12.0	166	12
Red Mountain Mont.	15A1	6000	4/4	87.4	30.4	21.3	19.2	18.2	167	12
Sandon	Canada	3500	3/31	44.7	14.5	12.8	11.4	10.1	144	11
Sinclair Pass	Canada	4500	3/31	27.8	5.9	3.6	4.1	4.7	125	12
Smith Creek	16A1	4800	3/31	155.0	58.1	49.3	42.2	40.2	145	6
Sullivan Mine	Canada	5100	4/1	64.7	21.1	15.3	14.7	16.2	130	4
Upper Elk River	Canada	4400	3/31	36.2	10.9	7.5	9.1	9.2	119	3
			AVERAGE	71.3	24.1	20.1	18.5	16.4	147	

MONTANA SNOW SURVEYS April 1, 1950

MISSOURI BASIN

DRAINAGE BASIN AND SNOW COURSE **	No.	Elev.	Date of Survey 1950	Snow Depth (In.) 1950	Water Content (Inches) April 1 1950	Past Records 1949	Past Records 1948	Average Data April 1 Avg.	Average Data April 1 %Avg.	Years of Record
FLATHEAD RIVER										
Big Creek	13B3	6750	3/30	151.0	53.8	0.0	45.8	38.2	141	8
Brush Creek	14A4	5000	3/29	61.7	18.9	19.0	0.0	12.0	158	6
Cattle Queen	13A1	4700	4/2	120.7	45.3	35.5	31.2	29.7	152	12
Desert Mountain	13A2	5600	3/31	71.8	23.3	19.3	14.8	14.6	160	12
Hell Roaring Divide	14A3	5700	3/31	11.3	37.6	34.0	31.0	30.1	125	7
Kishenehn	14A2	4300	3/30	40.3	10.7	8.0	5.5	7.7	139	5
Limestone Pass	13B8	7600	4/1	141.7	54.7	46.3	43.6	48.2	112	3
Logan Creek	14A5	4300	3/30	39.1	10.3	12.5	10.0	7.3	141	12
Marias Pass	13A5	5250	3/31	83.0	28.7	21.4	18.9	17.0	169	15
North Fork Jocko	13B7	6330	4/1	149.0	56.2	0.0	46.2	39.8	142	9
Rainy Lake	13B6	4300	3/30	44.0	18.9	14.5	11.0	13.6	139	4
Snow Lab. #16	13A9	5200	3/28	83.5	28.2	22.4	9.2	24.8	106	4
Spotted Bear Mt.	13B2	7000	3/29	50.8	19.2	19.6	0.0	19.4	99	2
Strawberry Lake	13B10	6500	4/30	166.3	59.1	47.8	43.8	50.2	118	3
Trinkus Lake	13B1	6500	3/29	156.4	57.3	45.0	47.6	50.0	114	3
Trout Lake	13B11	3600	3/30	76.4	27.0	21.0	14.6	20.9	129	3
Upper Holland Lake	13B5	7000	4/5	125.6	50.8	0.0	0.0	0.0	00	1
			AVERAGE	98.4	35.3	24.0	27.4	26.5	133.2	
UPPER CLARK FORK										
Chessman Res.	12C5	6200	4/1	15.6	4.4	7.6	9.2	4.6	96	15
East Fork R. S.	13D1	5400	3/31	23.7	7.6	10.8	3.5	4.8	158	12
El Dorado Mine	13C9	7800	4/4	88.6	27.7	--	--	--	--	2
Gold Creek Lake	13C8	7200	4/4	68.0	20.4	--	--	--	--	1
Intergaard	13C4	6450	4/13	28.9	8.0	10.8	10.3	8.3	100	6
North Fork Jocko	13B7	6330	4/1	149.0	56.3	0.0	46.2	39.8	142	9
Pipestone Pass	12D1	7200	3/31	20.2	4.2	7.9	7.4	5.6	75	12
Rainy Lake	13B6	4200	3/30	44.0	18.9	14.5	11.0	13.6	139	4
Skalkaho Summit	13C3	7258	4/3	96.6	24.0	34.6	29.2	22.8	105	12
Slide Rock	13C2	7100	4/5	62.6	18.0	18.8	19.1	13.6	138	14
Stemple Pass	13C1	6900	3/31	44.2	11.6	13.5	10.3	9.4	127	12
Storm Lake #2	12C7	12C7	4/4	56.6	16.7	15.1	19.7	16.6	101	12
Stuart Mill	13C6	6500	4/13	21.6	7.2	9.5	9.2	6.4	113	6
Stuart Mount. #1	13C1	7400	4/2	103.5	37.9	33.3	38.2	28.6	134	13
Picnic Grounds	13C6	6500	4/13	10.0	2.6	--	4.7	3.2	81	5
Southern Cross	13C5	6500	3/13	15.4	4.4	7.3	6.8	4.5	99	6

MONTANA SNOW SURVEYS April 1, 1950

MISSOURI BASIN

DRAINAGE BASIN AND SNOW COURSE **	No.	Elev.	Date of Survey 1950	Snow Depth (In.) 1950	Water Content (Inches) April 1 1950	Past Records 1949	Past Records 1948	Average Data April 1 Avg.	Average Data April 1 %Avg.	Years of Record
UPPER CLARK FORK (Continued)										
Tenmile, Lower	12C2	6250	4/3	28.8	7.6	8.8	9.1	6.2	142	15
Tenmile, Middle	12C3	6800	4/4	48.9	12.8	12.8	14.1	10.2	122	15
Tenmile, Upper	12C4	8000	4/3	54.3	15.8	14.8	18.1	13.1	121	15
Lookout	15B2	5250	4/4	121.0	47.5	[illegible]	[illegible]	17.[illegible]	26[illegible]	6
Above Roland	15B7	4350	3/10	98.7	35.0	--	--	--	--	1
Roland			3/10	129.6	45.4	--	--	--	--	1
Below Roland	15B6	3770	3/10	53.8	18.4	--	--	--	--	1
Above Burke		4100	3/6	79.6	26.8	--	--	--	--	2
Sunset	15B9	5600	3/7	117.5	34.0	--	--	--	--	1
			AVERAGE	69.2	22.2	16.5	18.3	14.6	153	
PEND OREILLE										
Baree Mt.	13B1	6000	3/31	151.8	61.3	52.2	40.6	38.8	158	12
Freezeout Summit	15C3	7000	4/5	132.7	36.6	37.6	33.7	0.0	109	14
Hodoo Creek	13C1	6200	4/5	176.0	70.0	59.5	42.[illegible]	45.6	154	14
Mosquito Ridge	16A4	5600	4/3	17[illegible].0	50.6	14.5	31.5	34.3	151	14
			AVERA[illegible]	147.6	54.4	40.9	37.1	37.2	143	
BITTERROOT										
East Fork R. S.	13D1	5400	3/31	23.7	7.6	10.8	6.5	4.8	158	12
Gibbons Pass	13D2	7100	3/31	84.4	30.0	29.0	23.0	21.5	139	12
Mud Creek Pasture	14C1	4500	4/1	23.3	8.2	13.4	8.7	6.4	128	14
Nezperce Camp	14D2	5580	4/5	46.2	16.0	20.8	14.9	13.0	123	14
Nezperce Pass	14D1	6575	4/5	59.6	20.0	24.0	23.6	16.9	118	14
Skalkaho Summit	13C3	7258	4/3	96.6	24.0	34.6	29.2	22.8	105	12
Stuart Mt. #1	13C1	7400	4/2	103.5	37.9	23.3	38.2	28.6	134	13
Moose Creek	13D16	6200	4/3	54.0	18.4	21.[illegible]	18.[illegible]	15.4	120	14
Kit Carson	14D3	4700	4/6	27.6	9.0	--	--	64.7	139	12
Savage Pass	14C4	6000	3/29	106.1	34.4	--	--	22.8	151	8
Powell Pasture	15C3	3700	3/30	55.0	20.4	--	--	12.3	166	11
Packers Meadow	14C2	5700	4/1	77.7	31.1	[illegible]	24.3	20.8	150	14
			AVERAGE	71.2	24.2	23.5	21.7	18.7	129.4	

Federal - State - Private

COOPERATIVE SNOW SURVEYS

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